

The editor comments that the goal of this volume is to expand the users range of techniques and provide step by step instruction, extensive notes in trouble-shooting, and cover special topics. In my view, it is quite clear that Dr. Tymms has attained his goal with this excellent text.

I would certainly recommend this volume as a reference in any molecular biology laboratory.

Richard Arakaki

**Molecular Biology of Diabetes. II. Insulin Action, Effects on Gene Expression and Regulation, and Glucose Transport;** Edited by B. Draznin and D. LeRoith; The Humana Press; Totowa, New Jersey, 1994. xviii + 555 pp. \$ 99.50. ISBN 0-896-032868.

Part two of 'Molecular Biology of Diabetes' has the subtitle 'Insulin Action, Effects on Gene Expression and Regulation, and Glucose Transport'. The purpose of this volume is to offer the latest knowledge from research on diabetes, and particularly to present insights into the substantial progress made in the current understanding of insulin action. To achieve this, the editors received contributions from several of the top researchers in this field.

The volume is further divided into two parts: the first on 'Molecular and Cellular Aspects of Insulin Action' (Chapters 1 to 21), and the second on 'Molecular Mechanisms of the Insulin-Regulatable Glucose Transport' (Chapters 22 to 26). The book starts with two excellent reviews on already well-established topics, the first one by S.I. Taylor and his coauthors on mutations in the insulin receptor gene in humans with extreme insulin resistance, and the second review on the structure-function relationship of the insulin receptor by J.M. Olefsky and W.J. Langlois. Other receptors belonging to the insulin receptor family are also covered in the book, the IGF-I receptor, insulin/IGF-I hybrid receptors, and the insulin receptor-related receptor. Seven chapters, a quarter of the book, are devoted to the continuously growing, yet poorly understood topic of insulin signalling. These Chapters cover the role of Insulin Receptor Substrate 1, p21ras, and kinases and phosphatases in insulin action. Another issue covered is the role of insulin in the regulation of gene expression. Research illustrating this subject is presented in four chapters. It is worth mentioning Chapter 3 on the use of subtraction cloning methods by C.R. Kahn and C. Reynet, as an example of the application of new techniques to the identification of diabetes-related genes. The topic of the insulin-regulatable glucose transport is extensively covered by the five chapters that constitute the second part of the book.

In terms of the distribution of the topics in the book, while the second part is well assembled and maintains internal consistency, the first part is not so well organized. This first part of the book appears to contain three distinct areas, which might perhaps have been better presented as separate entities, in order to maintain the overall consistency: one group

on insulin and related receptors, a second on signal transduction, and a third group on gene expression and regulation. The distribution of the chapters in the book attempts to reflect this organization, but it is not clear to us why the more methodological Chapter 3 on subtraction cloning is placed between a chapter on the insulin receptor, and a chapter on the insulin receptor-related receptor, in the first group. It would perhaps have been more appropriately placed in the third group of chapters on gene expression and regulation. There are some other examples of misleading locations in the book, particularly Chapters 19 to 21, which could have been placed immediately after the Chapter 4 on insulin receptor-related receptor, since they deal with IGF receptor and its relationship with the insulin receptor, and the role of its ligand in diabetes.

Although the reviews are of excellent quality, another weakness of this volume is repetition. One may admit that it is difficult to define a clear separation between topics, particularly in signal transduction pathways, without creating an artificial border that distorts the reality. However, it is obvious that part two of 'Molecular Biology of Diabetes' has reiterative chapters, ranging from overlapping issues to overt redundancies, and even between consecutive chapters. The most obvious cases are the overlap between Chapters 5 and 6 (showing partial redundancy on Insulin Receptor Substrate-1), between Chapters 13 and 18 (conceptual redundancy on genes regulated positively by insulin), and between Chapter 23 and 24 (complete redundancy on the whole topic of GLUT-4 phosphorylation, virtually a duplication). It would have been better to remove these redundancies and devote more space to issues like classic and transgenic animal models, essentially ignored in this Molecular Biology of Diabetes.

Nevertheless, the reviews are of outstanding quality for those who wish to increase their knowledge of the molecular biology of diabetes and insulin action. This book is especially useful for students, teachers and researchers who seek a relatively recent overview on insulin action.

Fatima Bosch and Alfons Valera

**Tamoxifen – Molecular Basis of Use in Cancer Treatment and Prevention;** Edited by Helen Wiseman, John Wileys & Sons, Chichester, 1994. x + 209 pp. \$ 29.95. ISBN 0-471-943169.

Tamoxifen is an extensive review of the antiestrogen, tamoxifen, its chemistry, pharmacology, and clinical use both in treatment and prevention. It includes a description of the action of tamoxifen at the molecular level through the estrogen receptor mechanism. Actions on oncogene expression and growth factors, and on enzyme activities are given in separate chapters, and resistance to tamoxifen as well as its advantages and disadvantages compared to pure antiestrogens are briefly described.

A fascinating aspect of tamoxifen is its effect as antioxidant on cellular membranes. This is probably surprising for many readers and the subject is well described in the book. Also, the cardioprotectant action is interesting and important in the discussion of the use of tamoxifen in preventive medicine.

The various chapters cover the many facets of tamoxifen. The references are appreciably up to date and the author seems, as a principle, to have avoided references before 1990. In some instances, though, the reader misses the original references on the pioneering work in the field. The book is not easy to read due to the overwhelming bulk of information presented in a concentrated form with too little space for conclusions and speculations. However, this detailed and comprehensive description of tamoxifen will probably be helpful for clinicians as well as researchers who are working in this field.

Per Briand